Index

Note: Page numbers of chapter titles are in **boldface** type.

ALIMENTARY SYSTEM, effects of hypothyroidism on, 33-34
Aminoglutethimide, antithyroid action of, 135
Antibodies, thyroid-hormone-binding, 12
Antibody tests, in Hashimoto's disease, 65-67
Antithyroid drugs—
  assessment of effect of, 131-132
  hypothyroidism from, 6-7
  placental transfer of, 132-134
Autoimmune diseases, associated with Hashimoto's disease, 73-74
Autoimmune thyroiditis, 23-24, **63-80**
  in children, 65
Autoimmunity, in aetiology of goitre, 169-170

BRAIN DEVELOPMENT, thyroid hormones and, 49-50
Brassicaceae, goitrogens in, 140
Breast milk, antithyroid drugs in, 134

CALCIFICATION, intrathyroidal, goitre associated with, 158
Calcitonin, measurements of, 223-224
Carcinoma—
  anaplastic, 199-201, 216-217
  follicular, 198-199, 213-216
    treatment of, 227-238
  medullary, 201-202, 217-219
    treatment of, 223-226
  papillary, 195-198, 211-213
Cardiovascular system, effects of hypothyroidism on, 34-36
Cassava, goitrogens in, 140
Cobalt, antithyroid action of, 135
Coupling defects, in dyshormonogenetic goitre, 157
Craniostenosis, 135
Cretinism, endemic, **97-127**
  aetiology of, 110
  clinical syndromes of, 111-114
    myxoedematous,, 112-113
    nervous, 113-114
  definition of, 115-116
  functional defects in, 114-115
  goitre in, 110-111
  pathogenesis of, 116-119
  prophylaxis and treatment of, 119-123
Cushing's syndrome, management of, 225

DEHALOGENASE, defect in dyshormonogenetic goitre, 157-158
de Quervain's thyroiditis, 7-8, 71, **81-95**
  aetiology of, 82-84
  clinical manifestations of, 85
  course of, 87
  diagnosis of, 90-91
  incidence of, 81
  laboratory tests for, 88-90
  pathology of, 84-85
  therapy for, 91-92
Diarrhoea, management of, 225-226
Dyshormonogenesis, 4-5, **145-165**

ENDOCRINE GLANDS, effects of hypothyroidism on, 36-37
Ethionamide, antithyroid action of, 136

FOOD-STUFFS, goitrogens in, 139-140

GOITRE—
  character of in Hashimoto's disease, 65
  diffuse, management of, 177
  dyshormonogenetic, **145-165**
    biochemical aspects of, 146-147
    clinical aspects of, 145-146
    histology of, 146
    laboratory evaluation of, 147-149
    specific defects in, 149-158
  endemic, 7, **97-127**
    assessment of, 103-104
    clinical spectrum of, 104-106
    prophylaxis and therapy for, 119-123
    serum hormone levels in, 101-103
    structure and function of, 100-101

goitrogen-induced, clinical features of, 129-130
Hashimoto, *see also* Hashimoto's disease
response of to treatment, 71-73
impalpable, 106
in the cretin, 110-111
multinodular, 158-159
management of, 174-176
therapy for, 189
non-toxic, **167-179**
aetiological factors in, 167-170
clinical features of, 172-173
development of, 171-172
epidemiology of, 170-171
management of, 174-177
thyroid function in, 173-174
painful, 70
secondary to thyroid hormone resistance, 159-160
Goitrogens, **129-144**
classification of, 130-141
naturally-occurring, 139-140, 169
Graves' syndromes—
Hashimoto's disease and, 70
spontaneous hypothyroidism in, 9-10
end-stage hypothyroidism, 9
preceding hyperthyroidism, 9-10

HASHIMOTO'S DISEASE, 8-9, **63-80**
association with other autoimmune disorders, 73-74
clinical variants of, 63-65
diagnosis of, 65-67
genetic predisposition to, 74-75
pathogenesis of, 75-76
presenting symptoms of, 64-65
Hormones, in treatment of carcinomas, 228-229
Hydrogen peroxide, defective generation in dyshormonogenetic goitre, 154
Hyperparathyroidism, management of, 225
Hyperthyroidism, Hashimoto's disease and, 67-70
Hypopituitarism, 13
Hypothalamic—pituitary function, tests of, 40-41
Hypothyroidism—
aetiology of, **3-19**
assessment of, 107-109
associated biochemical abnormalities, 41
clinical features of, **29-38**
alimentary system, 33-34
cardiovascular system, 34-36
haematology of, 36
muscle, 33
nervous system, 32-33
respiratory system, 34
skin and appendages, 31-32
complications of, **29-38**
congenital, 4-5, **49-62**
clinical features of, 50-52
neonatal screening for, 56-59
treatment of, 59
epidemiology of, **21-27**
limitations of studies on, 21-22
hypothalamic, 14
in children, 37
incidence of, 60
investigation of, **39-43**
mild, 30
natural history of, 25
overt, 30
prevalence of, 22-23
peripheral, 12-13
resistance to thyroid hormones, 12
the low-triiodothyronine syndrome, 12-13
thyroid-hormone-binding antibodies, 12
pituitary, 13
postoperative, 10-11
primary, 3-12
developmental anomalies, 3
subclinical, 30-31
transient neonatal, 60-61
treatment of, **43-48**
control of therapy, 44-45
replacement therapy, 43-44

IODIDE, goitre from, 136-137
Iodide-trapping, defect in dyshormonogenetic goitre, 149-150
Iodine—
hypothyroidism from, 6-7
in aetiology of goitre, 167-168
radioactive, hypothyroidism after, 11-12
Iodized oil, in prophylaxis and treatment of endemic goitre and cretinism, 120-123
strategy of, 122-123

LITHIUM, antithyroid action of, 137-138
Lymphoma, malignant, 202, 219
treatment of, 238-239

METASTATIC LESIONS, 220
Methyl xanthines, antithyroid action of, 138
Muscle, effects of hypothyroidism on, 33
Myxoedema, *see also* Hypothyroidism, overt coma, 45-46

NERVOUS SYSTEM, effects of hypothyroidism on, 32-33
Neuromas, management of, 225
Newborn infant—
goitrogens and, 134-135
thyroid hormones in, 53-55

PENDRED'S SYNDROME, 151-153
Perchlorate, as an antithyroid drug, 135
Pseudohypoparathyroidism, 14

RADIATION, in treatment of carcinomas, 229-230
Radioiodine, in treatment of carcinomas, 230-235
Radiotherapy, in treatment of carcinomas, 235
Resorcinol, antithyroid action of, 138
Respiratory system, effects of hypothyroidism on, 34
Riedel's thyroiditis, 7, 71

SARCOMA, 219-220
Skin, effects of hypothyroidism on, 31-32
Soya beans, goitrogenic action of, 139
Squamous tumours, 220
Sulphonamides, antithyroid action of, 138
Sulphonylureas, antithyroid action of, 138

TERATOMA, 219
Thiocyanate, antithyroid action of, 139
Thionamides, hypothyroidism from, 6
Thyroglobulin, defects in synthesis in dyshormonogenetic goitre, 154-156
Thyroid antigens, 65-67
Thyroidectomy, hypothyroidism after, 10-11
Thyroid function, tests of, 39-40
Thyroid gland, infiltrative disease of, 5-6
Thyroid hormones—
  brain development and, 49-50
  goitre secondary to, resistance to, 159-160
  in the newborn infant, 53-55
  peripheral resistance to, 12
Thyroiditis—
  autoimmune, 8-9, 23-24
  de Quervain's, 7-8, 71, 81-95
  goitrous autoimmune, **63-80**
  invasive fibrous, 7
  multifocal, 71
  painless, 86-87
  Riedel's, 7
  silent, 86-87
  subacute, 7-8, **81-95**
Thyroid nodules, **181-192**
  clinical status of patient with, 181-182
  laboratory evaluation of, 182-187
    basic evaluation, 182-185
    non-radioisotopic studies, 185-187
  pathophysiology of formation of, 187-189
    benign tumours, 187-188
    malignant tumours, 189
  therapeutic strategy, 189
Thyroid peroxidase, defects relating to in dyshormonogenetic goitre, 153-154
Thyroid tumours—
  aetiology of, **193-207**
  classification of, 194-195
  clinical features of, **209-221**
    case history, 209-210
    radiography, 211
    radioisotope scans, 210-211
  treatment of, **223-242**
Thyrotoxicosis, drugs used in treatment of, 131-135
Thyrotrophin—
  abnormal levels of, 13
  deficiency of, 13
  in the newborn infant, 53-55
  screening for in congenital hypothyroidism, 57-59
Thyroxine, screening for in congenital hypothyroidism, 56-57
Triiodothyronine, low-level syndrome, 12-13

Index

Note: Page numbers of chapter titles are in **boldface** type.

ACTH, 306
  distribution, 306
  function, 306
α-amides, 285
Angiotensin, 310
Antibodies in hormone characterization, 287-8
Antigens, separation of in radioimmunoassay, 273
Antisera—
  assessment of, 269-71
  production of, 268-9
Apudomas, 331, 414-5
APUD system (Pearse, 1968), 302, 331, 414

BOMBESIN, 309-10, 320-1
  distribution, 309, 321
  function, 309-10
Bombesin-like immunoreactivity, 285, 287-8
Bovine pancreatic polypeptide, effects in man, 390-1
Brain and gut, **299-312**
Brain and gut peptides, 313

CHARACTERIZATION, of gastrointestinal hormones, chemical, **281-298**
Chemoreceptor — paraneurone system (Fujita, 1976), 302
Chloramine-T method, 271
Cholecystokinin, 308, 341, 357
Cholecystokinin-pancreozymin, 257-9
Chronic pancreatitis, human pancreatic polypeptide and, 392-3
Coeliac disease (gluten sensitive enteropathy), gastrointestinal hormones and, 341-3
Coherin, 310

D-CELLS, 337
Diabetes mellitus—
  human pancreatic polypeptide and, 393-4
  somatostatin and, 355-6
Diffuse endocrine system, concept of, 300-3, 331
Disease of gastrointestinal tract, gastrointestinal hormones and, **331-47**
Disulphide bridges, 285-6
Dual nerve-cell and endocrine-cell distribution, candidates for, 310
Duodenal ulceration, gastrointestinal hormones and, 335-8

ENDOCRINE CELLS, ontogeny of, 417
Endorphins, 306
Enkephalins, 306, 322-3
  distribution of, 306, 323
  function, 306
Enterochromaffin cell system (Erspamer, 1954), 302
Entero-insular axis and GIP, *see* GIP and entero-insular axis

FASTING, prolonged, effects on human pancreatic polypeptide plasma level, 389

G-CELLS, 335-337
Gastrectomy, total, for Zollinger—Ellison syndrome, 442
Gastrin, 265, 266, 267, 268-9, 308, 434-8
  actions, 436
  assay, 277
  chemistry, 434
  distribution, 308
  in intestinal adaptation after small bowel resection, 339-40
  and lower oesophageal sphincter pressure, 332-3
  nomenclature, 434
  occurrence, 435-6
  pathology, 437-8
  secretion—
    endocrine, 436
    exocrine, 436
    neurocrine, 436
    paracrine, 437
Gastrointestinal hormones—
  cautionary tales, 257-9

characterization of, 252-6
chemical characterization of, **281-98**
clinical implications, 259-61
in coeliac disease (gluten sensitive enteropathy), 341-3
and disease of gastrointestinal tract, **331-47**
and duodenal ulceration, 335-8
functions other than gastrointestinal, 256
general concepts, **249-63**
and human pancreatic polypeptide plasma levels, 386-7
and lower oesophageal sphincter, 332-4
metabolic effects of, **349-63**
nomenclature, 250-2
purification of, 281-4
radioimmunoassay of, **265-80**
interpretation of results, problems associated with, 275-7
standardization of, 273-5
role in intestinal adaptation after small bowel resection, 338-41
tools of trade in research into, 257
Gastrointestinal polypeptide, **365-77**
and entero-insular axis, **365-77**
exogenous administration—
glucagonotropic effect of, 369-70
insulinotropic effect of, 367-8
pathophysiology, 372-374
physiology of, 366-77
radioimmunoassay, 370-5
site of origin, 366-7
GIP, *see* Gastrointestinal polypeptide
Glucagon-like immunoreactivity, 351-2
Glucagonoma syndrome, 422-6
Gut endocrine tumour syndromes, **413-32**
Gut endocrine tumours—
endocrine cell ontogeny in, 417
histogenesis, 417-8
localization of, 427-8
mixed, 417-8
neuroendocrine peptides in, 416-7
nerve cells in, 416
treatment, 428
Gut hormones—
metabolic effects of, **349-63**
profile of, 252
Gut, neuroendocrine design of, **313-30**

HISTAMINE H_2-receptor antagonists, in treatment of Zollinger—Ellison syndrome, 443
Human pancreatic polypeptide, **379-99**
basal plasma levels, 381
age, effects on, 381
food-induced increase in, mechanisms of, 383
ingestion of nutrients, effects on, 382
prolonged fasting, effects on, 389
cells, immunohistochemical localization of, 379-80
in disease, 391-4
islet cell tumours, 391-2
multiple endocrine neoplasia Type 1, 392
chronic pancreatitis, 392-3
diabetes mellitus, 393-4
distribution in tissues, 379-80
endogenous circulating, 380-1
and gastrointestinal hormones, 386-7
immunohistochemical localization of cells, 379-80
pancreatic islets and, 387-8
regulation of secretion in healthy subjects, 380-9
release of—
adrenergic effects on, 388-9
cholinergic effects on, 388
hormones of the GI tract and pancreatic islets, effect on, 386-7
neural effects on, 384-5, 388-9
in tissue extracts, 380
5-Hydroxytryptamine, 303
distribution, 303
function, 303

INCRETIN, 365
Insulin, 310
Insulinomas, 420-2
Iodination, 271-3
Intestinal adaptation after small bowel resection, gastrointestinal hormones and, 338-41
IR-GIP, 370-4
Islet cell tumours, and human pancreatic polypeptide, 391-2

KAROLINSKA INSTITUTE, studies at, 284-6

LOWER OESOPHAGEAL SPHINCTER, gastrointestinal hormones and, 332-4

MELATONIN, 304
distribution of, 304
function of, 304
Metabolic effects of gut hormones, **349-63**
Motilin, **401-6**
chemistry of, 401
detection of, 402
distribution of, 402
history of, 401
pathology of, 405
pharmacology of, 402
physiology of, 403-5
Multiple endocrine adenopathy, 427
Multiple endocrine neoplasia, Type I, human pancreatic polypeptide and, 392

NEURAL EFFECTS, induced by food ingestion, 384-5
Neurocristoma, 414
Neuroendocrine design of gut, **313-30**
  physiology of, 313-4
  technology of study, 314-5
Neuroendocrine peptides, 416-7
Neuropeptides, 314-29
  fixation of, 314
  specificity of, 314-5
Neurotensin, 307, **406-10**
  chemistry of, 406-7
  detection of, 407
  distribution of, 307, 408
  function, 307
  pathology of, 408-10
  pharmacology of, 407
  physiology of, 408-10
Nomenclature—
  by cell types, 251-2
  of individual peptides, 250-1
  whole system, 250
N-terminal histidine, 286
Nutrients and human pancreatic polypeptide plasma levels, 382-4

PANCREATIC ISLETS, and human pancreatic polypeptide plasma levels, 387-8
Pancreatic polypeptide, 310
  biological effects of, 389-91
  chemistry and species homology of, 379
  in hyperglycaemic obese mice, 394
  infusions of, studies with, 381
  metabolism and pharmacokinetics, 380-1
Peptidergic neurons, 299-30
Peptides, individual, 315-27
  labelling of, 271-2
Peripheral paracrine system of clear cells (Feyrter, 1938), 302
PIHIA, 285
Polyodonto-paraepithelial system (Pages, 1956), 302
Porcine intestinal peptide with bombesin-like immunoreactivity, 285
PP, *see* Pancreatic polypeptide
Precursors—
  mechanisms of manufacture, 291
  proposals on, 290-1
Primitive cells, information provided by, 292-3
Prolactin, in adaptation of small bowel after resection, 340-1
Purification of gastrointestinal hormones, problems of, 281-4

RADIOIMMUNOASSAY of gastrointestinal hormones, 265-80, 370-72
  interpretation of results, problems associated with, 275-7
  standardization in, 273-5

SECRETIN, 259, 265, 266, 287, 350-1
Separation of antibody bound from free hormone, 273
Somatostatin, 267, 307-8, 316-20, 352-7
  and carbohydrate metabolism, 354-5
  diabetes mellitus and, 355-6
  distribution, 307
  function, 307
  pathology, 319
  therapeutic application, 356-7
Somatostatinoma, 426
Stimulus—secretion coupling, 303
Strategies and stringencies in hormonal studies, 293-4
Substance P, 304-5, 313, 315-6
  distribution, 304, 316
  function, 304-5
  pathology, 316
Surgery, radical, for Zollinger—Ellison syndrome, 443-4
Synthetic gut hormones, use of, 286-7

THYROTROPHIN-RELEASING factor, 310
Tools of trade, in gastrointestinal hormone research, 257
Tumours, *see* Gut endocrine tumour syndromes

VASOACTIVE INTESTINAL polypeptide, 250, 265, 309, 323-7, 358
  distribution, 323
  actions, 323
  pathology, 323-7
Verner—Morrison syndrome, 323, 414, 418-20
VIP, *see* vasoactive intestinal polypeptide

WATERY DIARRHOEA syndrome, 261, 323, 418-20

ZOLLINGER—ELLISON syndrome, 260-1, 277, 333, 335, 414, **433-46**
  aetiology, 438-9
  diagnosis, 440-1
  findings, 439-40
    endoscopical, 440
    radiological, 440
  secretory studies, 440
  treatment—
    histamine H_2-receptor antagonists, 442
    radical surgery, 443
    total gastrectomy, 442

Index

Note: Page numbers of chapter titles are in **boldface** type.

ACETALDEHYDE, alcohol and, as testicular toxins, 501-502
Acromegaly—
  and carbohydrate metabolism, 585
  resulting from CNS disease, 481-482
Addison's disease, 539-540
  and associated ovarian failure, 518
Adrenal androgens, in elderly subjects, 609
Adrenal cortex, and pituitary—adrenal axis, effects of ageing on, 608-609
Adrenal function, disorders of and the ovary, 513
Adrenal hypofunction, 514
Adrenal insufficiency, systemic diseases manifested as, 539-543
  Addison's disease, 539-540
  aetiology, 540-541
  diagnosis and therapeutic considerations, 541-542
Adrenal manifestations of systemic diseases, **527-545**
  functional and biochemical effects, 527-530
  glucocorticoid excess, 530-534
  hyperaldosteronism, 534-538
  steroid metabolism and secretion, 529-530
Adrenergic blocking agents, effects on glucose metabolism, 593
Adrenocortical hyperfunction, 480-481
Adrenogenital syndrome, 514
Age, alterations of thyroid function with, 625-626
Ageing, and endocrine function, **603-619**
Alcohol—
  abuse of, chronic effect on sexual function, **499-510**
  -induced sexual dysfunction in women, 502-503
Alcoholic liver disease, disorders of vitamin D metabolism and, 566-567
Aldosterone—
  effect of ageing on secretion of, 608-609
  factors controlling release of, 528-529
Anorexia nervosa, 458-459, 478-479
Antidiuretic hormone—
  alterations in secretion of with age, 611-612
  inappropriate secretion of, 474-475
Ataxia telangiectasia, and glucose intolerance, 586
BENIGN intracranial hypertension, 476
Bone, effects of vitamin D metabolism on, 554-555
Bronchiectasis, and infertility, 488-489
CALCIUM, effect of ageing on serum content of, 608
Caloric deprivation, effect of on thyroid function, 626-628
Carbohydrate metabolism,
  adverse effects of drugs on, 591-594
  effect of ageing on, 612-613
  genetic abnormalities of, 585-587
Carcinoma, metastatic, in the ovary, 519-522
Central nervous system disease, **467-485**
  and disorders in regulation of pituitary function, 468-472
  endocrine malfunction in, 467
  precocious puberty and, 472-473
  salt and water regulation and, 473-475
Cerebral giantism, 476-477
Circulating hormones, basis of altered concentrations and actions, 453-454
Cirrhosis of the liver—
  and altered glucose metabolism, 583-584
  disorders of vitamin D metabolism in, 566-567
  and hypogonadism, 491-494
Congestive heart failure, and hypoglycaemia, 594
Cortisol, 527-528
Cushing's disease, 480-481, 514, 530-534
  and abnormal glucose tolerance, 585
  associated systemic diseases, 530-532
  clinical and biochemical manifestations of, 530
  diagnostic and therapeutic considerations, 532-534
DEPRESSION, 481
Diabetes insipidus, 468, 471, 473-474
Diabetes mellitus, 580-583
  effect on the ovary, 515
  effect on thyroid function, 628
Diencephalic syndrome of infancy, 477

Drugs—
adversely affecting carbohydrate metabolism, 591-594
adrenergic blocking agents, 593
glucocorticoids, 591-593
oral contraceptives, 593-594
thiazide diuretics, 593
changes in thyroid function induced by, 632-635
effects of, on serum protein binding of thyroid hormone, 633-634
effects of, on testicular function, 495
effects of, on thyroid hormone synthesis and release, 632-633
inhibition of conversion of T_4 to T_3 by, 634-635

ECTOPIC ACTH syndrome, 532
Endometriosis, 517

'FETAL-ALCOHOL' syndrome, 502-503
Fibrocystic disease of the pancreas, and infertility, 489
Follicle stimulating hormone—
and function of the testis, 487
modulation of secretion of, 458, 459

GALACTORRHOEA, 482-483
Gastrointestinal tract, effects of vitamin D on, 553-554
Genetic abnormalities, of carbohydrate metabolism, 585-587
Genital TB, 516
Glucocorticoids—
effects on carbohydrate metabolism, 591-593
excess of (Cushing's syndrome), 530-534
metabolism and excretion of, 529
Glucose homeostasis, disorders of, 579-596
Gonadotrophin, production of, altered by alcohol, 503-504
Gonads, changes in function of, with age, 609-611
Growth hormone, secretion of—
decline of with age, 612
in states of caloric excess and deprivation, 454-458
monitoring of, 455-456
Growth retardation, 454, 457

HAEMOCHROMATOSIS, and hypogonadism, 494
Hepatic disease—
adrenal steroid metabolism modified by, 529
testis function in, 491-494
Hepatitis, and altered glucose metabolism, 583
Histiocytosis X, 468
Hormones—
binding to target cells, altered, 461-462
in diabetes mellitus, 462
in obesity, 462
in uraemia, 461
circulating, altered concentration and action of, 453-454
modulation of secretion of, 454-462
nutritional state as a major force in, 454-458
peripheral action, alteration of, 459-470
phase control of, altered, 458-459
tonic control of, altered, 454-458
Huntington's chorea, 471
Hyperaldosteronism—
clinical and biochemical manifestations of, 534
diagnostic and therapeutic considerations in, 537
diseases manifested as, 534-538
secondary, 535-537
Hypercortisolism, stress, 534
Hyperinsulinaemia, 579-581
Hypernatraemia, 475
Hyperoestrogenism, 504-506
Hyperoestrogenization, in alcoholic men, 504-506
Hyperprolactinaemia, in chronic alcoholics, 504-506
Hyperthyroidism—
and abnormal glucose tolerance, 585
and menstrual disturbances, 512-513
in patients with trophoblastic tumours, 632
Hypoandrogenization, in alcoholic men, 499-500
Hypoglycaemia—
alcoholic, 583-584
hepatitis-induced, 583
non-endocrine causes of, 594-595
congestive heart failure, 594
non-pancreatic tumours, 595
postprandial, 595-596
Hypogonadism—
hypothalamic, 478
therapy of, 506-507
Hyponatraemia, 474-475
Hypothalamic disease, organic, 468-472
Huntington's chorea, 471
inflammatory, 468
histiocytosis X, 468
sarcoid, 468
internal hydrocephalus, 470
irradiation, 471
trauma, 471-472
tumours, 468-470
hamartomas, 470

Hypothalamic hypophysiotrophic hormones, regulation of, 467
Hypothyroidism—
and menstrual disturbances, 512
resulting from x-ray therapy, 632

IDIOPATHIC growth retardation, 477
Idiopathic hypothyroidism, 477
Infection, and sepsis, and hypoglycaemia, 590-591
Inflammatory diseases of the ovary, 516-518
actinomycosis, 517
endometriosis, 517
genital TB, 516
oophoritis, 516-517
sarcoidosis, 516-517
schistosomiasis, 517

KARTAGENER'S syndrome, and infertility, 488
Kidney, effects of vitamin D metabolites on, 555

LAENNEC'S cirrhosis, effect on sexual function, 500-501
Leprechaunism, and hyperinsulinaemia, 586-587
Liver disease—
alcoholic, effect on sexual function, 500-501
altered glucose metabolism in, 583-584
bone disease associated with, 566
chronic, carbohydrate intolerance in, 584
effect on the ovary, 515-516
thyroid function in, 630-631
Luteinizing hormone—
and function of the testis, 487
modulation of secretion of in anorexia nervosa, 458, 459

MALNUTRITION, and testicular defect, 495
Menstrual cycle, disorders of, 512
Metastatic carcinoma, in the ovary, 519-522
Mineralocorticoids, metabolism and excretion of, 529
Myocardial infarction, and altered carbohydrate metabolism, 589

NEUROENDOCRINE dysfunction, diseases secondary to—
acromegaly, 481-482
adrenocortical hyperfunction, 480-481
anorexia nervosa, 478-479
benign intracranial hypertension, 476
cerebral giantism, 476-477
Cushing's disease, 480-481
depression, 481
diencephalic syndrome of infancy, 477
emotional deprivation, 479-480
galactorrhoea, 482-483
hypothalamic hypogonadism, 478
hypothalamic obesity, 483
idiopathic growth retardation, 477
idiopathic hypothyroidism, 477
pseudotumour cerebri, 476
Non-pancreatic endocrine disease, 584-585
acromegaly, 584-585
Cushing's syndrome, 585
hyperthyroidism, 585
phaeochromocytoma, 585
Non-pancreatic tumours, and severe hypoglycaemia, 594-595
Non-thyroid diseases, associated with alterations in thyroid hormone metabolism, 626-632
Nutritional status, and the function of the testis, 495

OBESITY, 579-581
and altered hormone binding to target cells, 462
and altered secretion of growth hormone, 456
and hypogonadism, 495
'hypothalamic', 483
Oophoritis—
acute, 516
chronic granulomatous, 516-517
Oral contraceptives, effect on glucose metabolism, 593-594
Osteomalacia, and rickets, anticonvulsant drug-induced, 557-561
Osteopenia, 567
Ovarian failure—
as result of treatment for systemic diseases, 522-523
abdominal irradiation, 522
chemotherapeutic agents, 523
premature, 518-519
Ovarian function, changes with age, 609
Ovarian steroidogenesis, alteration of by thyroid hormones, 513
Ovary, **511-525**
disorders of the pancreas, effect on, 515
inflammatory diseases of, 516-518
metastatic carcinoma in, 519-522
premature failure of, 518-519

PANCREAS, **579-601**
destruction of, 582-583
drugs, effect on, 591-594
genetic disorders and effect on, 585-587
pregnancy, effect on, 587-588
stress, effect on, 588-591

Pancreatic disorders, effect on the ovary, 515
Parathyroid gland, effect of ageing on function of, 607-608
Phaeochromocytoma, and glucose intolerance, 585
Pituitary—adrenal axis, effect of ageing on, 608-609
Pituitary function, disorders of CNS regulation of, 468-472
Pituitary—thyroid axis, age-related changes of, 604-607
Pituitary tumours, 457, 468-470
Precocious puberty, and organic CNS disease, 472-473
Pregnancy—
  glucose homeostasis, alterations of during, 587-588
  thyroid function, alterations of during, 625
Prolactin—
  decline of secretion of with age, 612
  increased concentration in chronic alcoholics, 503-504
Pseudotumour cerebri, 476

RENAL disease—
  function of the testis and, 489-491
  menstrual dysfunction and, 515
  modifying metabolism of adrenal steroids, 529
Renal failure—
  thyroid function in, 630
  vitamin D deficiency and bone disease associated with, 563-565
Respiratory disease, and the function of the testis, 488-489
  bronchiectasis, 488-489
  fibrocystic disease of the pancreas, 489
  Kartagener's syndrome, 488
Rickets, osteomalacia and, drug-induced, 557-561

SALT and water regulation, CNS disorders of, 473-475
Sarcoidosis, 516-517
  hypercalcaemia in, 568-569
Schistosomiasis, 517
Sexual dysfunction, in women, production of by alcohol, 502-503
Somatomedin, modification of formation of, 456-457
Spermatogenesis, effects of illness on, 487
Starvation, effects on thyroid function, 626-628
Stress, associated with alterations in carbohydrate metabolism, 588
Systemic disease,
  effects on thyroid hormone metabolism, 628-632
  endocrine manifestations of, **453-466**

TESTICULAR toxins, alcohol and acetaldehyde as, 501-502
Testis, functions of—
  altered nutritional status and, 495
  drugs, effect of on, 495
  hepatic disease and, 491-495
  renal disease and, 489-491
  respiratory diseases and, 488-489
  systemic disease, effects of on, **487-498**
Testosterone, decline of serum content of with age, 609-610
Thiazide diuretics, and glucose intolerance, 593
Thyroid, **621-639**
  function of—
    age-related changes in, 604-607, 625-626
    disorders of, 512-513
    drug-induced changes of, 632-635
    normal physiological changes in, 625-626
      in pregnancy, 625
Thyroid hormones—
  altered rates of degradation and secretion with age, 606-607
  conversion of T_4 to T_3, drug inhibition of, 634-635
  metabolism of—
    non-thyroid disease, associated alterations of in, 626-632
    peripheral, measurement of, 621-625
  serum protein binding of, effects of drugs on, 633-634
  synthesis and release of, effects of drugs on, 632-633
Thyroxine, defective conversion of, 459-461
  in chronic renal disease, 461
  in geriatric patients, 460
'Trade-off' hypothesis, 463
Trauma, effect on carbohydrate metabolism, 589-590
Trophoblastic tumours, hyperthyroidism associated with, 632
Tumour-induced syndromes, 453

URAEMIA, 581-582
  and decreased sperm production, 489

VASOPRESSIN, deficiency of, 473-474
Vitamin D—
  chemistry of, 547-553

effects of—
on bone, 554-555
on gastrointestinal tract, 553-554
on kidney, 555
on other tissues, 555-556
metabolism—
changes of, with age, 608
clinical disorders of, 556-570
anticonvulsant drug-induced osteomalacia and rickets, 559-561
associated with chronic renal failure, 563-565
decifiency states, 556-557
sarcoidosis, 568-569
with hepatic and gastrointestinal disorders, 566-568
hormonal aspects of, **547-577**

X-RAY therapy, resulting in hypothyroidism, 632